

A¹

While the master disconnect switch 334 is advantageous, a system including only a master switch 334 is disadvantageous for several reasons. First, as indicated above, typically the switch is located at a master control panel 324 which may be remote from an access point. In this case, once the operator recognizes a problem which requires operator intervention, the operator has to halt line operation, run to the master control panel 324, open the master disconnect switch 334, lock out and tag the switch 334, perform a lockout/tag out power off verification to ensure lockout and tag out, walk back to the problem station 312, access the station 312 to eliminate the problem, walk back to the control panel 324, untag and unlock the disconnect switch 334, close the switch 334 and then start the process once again. While this process may not seem burdensome where a processing line is relatively short (e.g., 10 stations long), this process is extremely burdensome in cases where a line may have many stations which may be up to 3000 or more feet from the master control panel 324 where problems occur routinely (e.g., several times per operator shift).

A²

Referring still to Fig. 2, in operation, with each of switches RLS1, RLS2 and RLS3 in their ON positions such that contacts 117, 118, 131, 132, 135 and 136 are closed and first contacts 116, 130 and 134 are open, when switches 78 and 80 are manipulated by an operator in an effort to provide power to hazard 52, all of the safety relay output contacts (i.e. contacts in boxes 72 and 74) are closed. In this case, control relay coil CR is energized such that control relay contact CR-1 is closed and contacts CR-2 and CR-3 are both open. Thus, all of the contacts in series with coils I-1 and I-2 are closed and each of coils I-1 and I-2 are energized. As current